

polyesters, poly(meth)acrylates and copolymers thereof.

A1 25. A coating composition according to claim 16, wherein the hydraulically setting inorganic binder is selected from waterglass, cement, lime and gypsum.

Remarks

Claims 16-25 are now pending in this application. Original claims 1-14 have been cancelled and original claim 15 has been withdrawn from consideration. Reexamination of the amended application is respectfully requested.

New claim 16 is directed to an "anti-seize" coating composition. Support for component (a) is found in the specification at page 6, lines 3 to 6, and at page 7, lines 25 and 26. Support for component (b) is found in original claim 3 and in the specification at page 10, lines 35 to 39, page 11, lines 7 to 12, and page 12, lines 1 to 10.

The present invention relates to coating compositions having anti-seize properties for disassemble socket/pin and/or threaded connections. The locking and sealing of such connections is of high importance. Locking and sealing means that socket/pin or threaded connections are locked and sealed with a composition which solidifies in the gap between socket and pin or between the parts of a threaded connection. If loosening and re-tightening of such connections is required, very often the problem arises that the connections are seized and can only be loosened and re-tightened by damaging the parts of the connection, or that loosened parts cannot be re-used. This is explained in detail on pages 1 and 2 of the specification.

The anti-seize compositions of the present invention are intended to avoid the above problem.

Thus, the anti-seize compositions on the one hand must be suitable to lock and seal the connections and on the other hand must allow a loosening and re-tightening of gap-filled connections without the above-mentioned problems. In other words, the anti-seize compositions are suitable to secure connections and facilitate the loosening of such connections.

Lubricating compositions, in contrast thereto, do not secure connections. They serve to reduce friction between parts. Therefore, there is a clear difference between the anti-seize compositions of the present invention and lubricating compositions.

Applicants believe the presently pending new claims obviate the rejection of the original claims under § 112 and are novel and non-obvious over the prior art of record.

Laepple et. a. does not teach an anti-seize composition. Rather, it refers to an aqueous lubricant composition comprising the components as stated in the Official Action. In view of the new claims, Laepple et. al. is by no means anticipating. As already mentioned, Laepple does not disclose an anti-seize composition. Further, the compositions described in Laepple et. al. do not contain the component (b) as defined in the new claim 16.

Exactly the same holds true for Jacobs which teaches a lubricant composition rather than an anti-seize composition. Further, a composition containing component (b) is not disclosed by Jacobs. Finally, the friction-adjusting component referred to by the Examiner is not a friction reducing additive. As can be seen from the statements in column 3 beginning with line 61 of Jacobs the friction-adjusting components are intended to increase friction rather than reduce it.

Applicants are submitting an IDS to present to the Examiner prior art cited in an International Search Report published in a corresponding international application on April 4, 2002.

DOCKET NO. 2612

Applicants respectfully request an early allowance of this application.

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Respectfully submitted,



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AMENDED CLAIMS

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16. A coating composition having anti-seize properties for disassemble socket/pin and/or threaded connections, comprising:
- a. at least one binder, selected from the group consisting of a curable or crosslinkable monomer, polymer or copolymer, physically setting polymer, or hydraulically setting inorganic substances,
 - b. at least one substance which releases gases at elevated temperatures, selected from the group consisting of azo compounds; hydrazine derivatives selected from the group consisting of 4, 4'-oxybis (benzenesulfohydrazide), diphenyl sulfone-3, 3-disulfohydrazide, diphenylene oxide-4, 4'-disulfohydrazide, trihydazinotriazine or p-toluenesulfonyl semicarbazide; tetrazoles; benzoxazines; carboxylic acids and carboxylic acid derivatives selected from the group consisting of malonic acid, α -ketocarboxylic acids, β -ketocarboxylic acids, α,α,α -trihalocarboxylic acids, glyceridecarboxylic acids, β,γ -unsaturated carboxylic acids, β -hydroxycarboxylic acids, β -lactones or carboxylic anhydrides; peroxy compounds;

peracids and salts thereof;

explosive substances, selected from the group consisting of the nitrates of glycerol, ethylene glycol, diethylene glycol, pentaerythritol and ethylenediamine, nitrocellulose, trinitrotoluene, picric acid, tetryl, hexogen, octogen, nitroguanidine, ammonium perchlorate, methylamine nitrate, hexahydro-1, 2, 3-trinitro-1, 3, 5-triazine, 2, 4, 6-trinitrophenol, N-methyl-N, 2, 4, 6-tetranitroaniline, and alkali metal azides and ammonium azides;

iii. at least one friction-reducing additive.

17. A coating composition according to claim 16, wherein component b) is selected from hexahydro-1, 2, 3-trinitro-1, 3, 4-triazine, N-methyl-N, 2, 4, 6-tetranitroaniline and 2, 4, 6-trinitrophenol.

18. A coating composition according to claim 16, wherein component b) is in microencapsulated form.

19. A coating composition according to claim 16, wherein the friction-reducing additive is selected from graphites, metal sulfides, polyolefins and fluorinated polyolefins.

20. A coating composition according to claim 16, wherein the friction-reducing additive is selected from polyethylene, polytetrafluoroethylene, graphite and molybdenum disulfide.

21. A coating composition according to claim 16, wherein component a) has an average molecular weight in the range from 300 to 25,000.

22. A coating composition according to claim 16, wherein component a) is selected from thermoplastic polymers and copolymers.

23. A coating composition according to claim 22, wherein component a) is selected from (meth)acrylic resins, epoxy resins and polyurethanes containing isocyanate groups.

24. A coating composition according to claim 16, wherein component a) is selected from polyolefins containing, in copolymerized form, units having functional groups, polyamides, saturated polyesters, poly(meth)acrylates and copolymers thereof.

25. A coating composition according to claim 16, wherein the hydraulically setting inorganic binder is selected from waterglass, cement, lime and gypsum.